

REMARKS

Entry of this amendment and reconsideration and allowance of the above-referenced application is respectfully requested. The present application has been reviewed in light of the Final Office Action mailed June 22, 2009. Claims 1 and 7 are amended, claims 6 and 12-31 are cancelled, and new claims 32-40 are added herein. Thus, claims 1-5, 7-11 and 32-40 are currently pending. Applicant respectfully submits that claims 1-5, 7-11 and 32-40 are allowable over the references of record as presented herein.

The Examiner has maintained the rejection of claims 1-4, 8, and 29-30 under 35 U.S.C. §103(a) as being obvious over U.S. Patent Application Publication No. 2003/0001141 to Sun et al. (“Sun”) in view of U.S. Patent No. 6,331,265 to Dupire et al. (“Dupire”). Claim 9 has been rejected under 35 U.S.C. §103(a) as obvious over Sun in view of Dupire and further in view of KR 20030005710 to Im et al. (“Im”). The Examiner has maintained the rejection of claims 6-7 under 35 U.S.C. §103(a) as being obvious over Sun in view of Dupire and further in view of U.S. Patent No. 6,531,513 to Haddon et al. (“Haddon”). The Examiner has also maintained the rejection of claims 10-11 and 30-31 under 35 U.S.C. §103(a) as being obvious over Sun in view of Dupire and further in view of U.S. Patent Application Publication No. 2002/0161096 to Loontjens et al. (“Loontjens”). Reconsideration and allowance of the pending claims is respectfully requested in view of the following remarks.

As to claims 1-4 and 8, nowhere does Sun disclose or suggest a modified carbon nanotube functionalized with a modifier that comprises an alkene. While Sun discloses the use

of aromatic amines as electron donors to dissolve nanotubes, nowhere does Sun disclose functionalization of nanotubes with alkenes as recited in claim 1.

Dupire fails to remedy the deficiencies of Sun, no matter how these references may be combined. Dupire provides a method for producing reinforced polymers, which includes introducing nanotubes into a polymer to provide a mixture of the polymer and nanotubes, stretching the mixture at or above the melting temperature (T_m) of the polymer to orient the nanotubes, and stretching the mixture in the solid state to further orient the nanotubes. Nowhere is there any disclosure in Dupire of modified carbon nanotubes that have been functionalized with alkenes as recited in claim 1.

Claims 2-4 and 8 depend from claim 1 and incorporate all its limitations therein. Thus, for at least the reasons noted above with respect to claim 1, neither Sun nor Dupire render these claims obvious and these claims are patentable as a whole.

As to claim 7, claim 7 depends from claim 1 and incorporates all of its limitations therein. As noted above, neither Sun nor Dupire render claim 1 obvious. Haddon fails to remedy the deficiencies of Sun, alone or in conjunction with Dupire. As stated by the Examiner in the Office Action of February 5, 2009, Haddon discloses “functionalization of carbon nanotubes by attaching an aliphatic amine” (Office Action page 4, paragraph 5). Nowhere does Haddon disclose or suggest functionalization of carbon nanotubes with an alkene as recited in claim 1. Nor does Haddon disclose a modifier such as isoprene. Thus for the same reasons claim 1 is patentable, claim 7 is also patentable.

As to claim 9, claim 9 depends from claim 1 and incorporates all its limitations therein.

As noted above, neither Sun nor Dupire render claim 1 obvious. Im fails to remedy the deficiencies of Sun, alone or in conjunction with Dupire. Im discloses addition of a carbon nanotube to ultrahigh molecular weight polyethylene. Nowhere is there any disclosure in Im of modified carbon nanotubes that have been functionalized with alkenes as recited in claim 1. Thus, for the same reasons claim 1 is patentable, claim 9 is also patentable.

As to the rejection of claims 10-11, claims 10-11 depend from claim 1, and incorporate all of its limitations therein. As noted above, neither Sun nor Dupire render claim 1 obvious. Loontjens fails to remedy the deficiencies of Sun, alone or in combination with Dupire. Nowhere does Loontjens disclose or suggest functionalization of a carbon nanotube with an alkene as recited in claim 1. Accordingly, as Loontjens does not remedy the deficiencies of Sun in combination with Dupire, claims 10-11 are patentable over these references for the same reasons claim 1 is patentable.

As stated in the Final Office Action, claim 5 had been objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form. Claim 5 is rewritten in independent form as claim 32 and claims 2-4 and 7-11 have been rewritten as claims 33-40, which depend from claim 32. No new matter has been added in these claims.

Should the Examiner have any questions concerning this Amendment, or feel that an interview would be helpful in resolving any outstanding matters, the Examiner is invited to contact Applicants' undersigned attorney at his convenience.

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Early and favorable action on the merits is earnestly solicited.

Respectfully submitted,



Michael R. Brew
Registration No.: 43,513
Attorney for Applicant(s)

CARTER, DELUCA, FARRELL & SCHMIDT, LLP
445 Broad Hollow Road - Suite 420
Melville, New York 11747
(631) 501-5700
(631) 501-3526 (fax)